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FITCHBURG, MASS.

WATER COMMISSIONERS

1887.

FIFTEENTH ANNUAL REPORT

—OF THE—

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JUL 3 1916

WATER COMMISSIONERS

—OF THE—

CITY OF FITCHBURG, MASS.,

FOR THE YEAR 1887.

FITCHBURG:
SENTINEL PRINTING COMPANY, PRINTERS
1888.

Board of Water Commissioners.

Charles H. Brown,	Term expires 1890.
Samuel D. Sheldon,	Term expires 1889.
Thomas C. Lovell,	Term expires 1888.

OFFICERS.

Charles H. Brown,	President.
Thomas C. Lovell,	Superintendent and Clerk.
A. W. F. Brown,	Water Registrar.

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McElroy
12 March 1917

WATER COMMISSIONERS' REPORT.

WATER COMMISSIONERS' OFFICE,
Fitchburg, Mass., December 1st, 1887.

To His Honor the Mayor, and the City Council:

GENTLEMEN:—The Board of Water Commissioners respectfully submit their fourteenth annual report, for the year ending November 30th, 1887.

EXTENSION OF WATER MAINS.

The water mains have been extended during the year as follows:

Fairview street,	768 feet of 4 inch cast iron.
Clarendon street,	342 feet of 6 inch cast iron.
Phillips street,	300 feet of 4 inch cast iron.
Fairmount street,	300 feet of 6 inch cast iron.
Westminster Hill road,	2900 feet of 4 inch cast iron.
Canton street,	800 feet of 4 inch cast iron.
Blossom street,	800 feet of 2 inch wrought iron.

Heywood street,	640 feet of 4 inch cast iron.
Birch street,	220 feet of 4 inch cast iron.
Water street,	500 feet of 4 inch cast iron.
Willow street,	370 feet of 4 inch cast iron.
Hazel street,	200 feet of 4 inch cast iron.
Hazel street,	175 feet of 2 inch wrought iron.
Federal street,	690 feet of 4 inch cast iron.
Plymouth street,	190 feet of 4 inch cast iron.
Daniels street,	425 feet of 4 inch cast iron.
Leominster road,	2054 feet of 4 inch cast iron.
Wanoosnac road,	960 feet of 2 inch cast iron.
Eaton street,	200 feet of 4 inch cast iron.
Ashburnham street,	670 feet of 2 inch wrought iron.
Total length - - - -	13,504 feet.

Total length of mains 185,534 feet, or 34.77 miles.

HYDRANTS.

Eleven new fire hydrants have been set for the city.
Total number owned by the city, 223.
Total number owned by private parties, 33.

SERVICE PIPES.

The street mains have been tapped for new supplies in 204 places, making the total number of taps to date 2,203. 10,339 feet of service pipe has been laid, of which 5,778 feet has been charged to the city, and 4,561 feet to takers. Total length of service pipe now in use 141,932 feet, the city owning 86,016 and water takers 55,916 feet.

TABLE

Showing the rainfall for each of the last twelve months, kindly furnished by Dr. Jabez Fisher.

December, 1886,	4.44 inches.	June, 1887,	3.34 inches.
January, 1887,	6.12 "	July, "	7.23 "
February, "	5.04 "	August, "	9.38 "
March, "	4.79 "	September, "	2.45 "
April, "	4.84 "	October, "	1.99 "
May, "	2.77 "	November, "	3.39 "

Total rainfall for the year, 55.78 inches, which is 13.78 inches above the average.

TABLE

Showing the average height of water in Overlook, Scott and Falulah reservoirs, for the past twelve months.

	Overlook.	Scott.	Falulah.
December, 1886,	38.50 feet.	35.00 feet.	20.00 feet.
January, 1887,	38.00 "	36.00 "	20.00 "
February, "	38.00 "	40.00 "	20.00 "
March, "	38.20 "	40.00 "	20.00 "
April, "	40.00 "	40.00 "	20.00 "
May, "	39.50 "	40.00 "	20.00 "
June, "	38.50 "	40.00 "	20.00 "
July, "	37.60 "	39.50 "	18.00 "
August, "	37.00 "	39.00 "	20.00 "
September, "	36.00 "	40.00 "	20.00 "
October, "	36.00 "	39.50 "	10.00 "
November, "	36.00 "	39.50 "	20.00 "

WATER FURNISHED THE CITY.

The department has furnished the city with water, the value of which is estimated as follows :

For Schools,	$892 00	
City Hall,	100 00	
Court House,	36 00	
Cemeteries,	50 00	
Parks,	50 00	
Almshouse,	100 00	
Engine and Hose Houses,	175 00	
Drinking Fountains,	100 00	
Watering Troughs,	800 00	
Watering Streets,	800 00	
256 Fire Hydrants, at $50,	12,800 00	
		$15,903 00

TABLE

Showing length, location and size of cement mains, low service.

STREETS.	16 in.	14 in.	10 in.	8 in.	6 in.	4 in.	2 in.	Gates
Academy				988				1
Blossom					1435			1
Boylston						283		
Caldwell	1255							1
Crescent				534				2
Central						300		1
Congress						295		
Chestnut						205		1
Fox						823		2
Fulton						160		
First						565		1
Goddard						407		
Garnet						170	655	
Goodwin						130		1
Granite						950		2
High					1376			1
Highland Avenue					1395			1
Hartwell						823		2
Harvard						150		
West Main		2016						2
Mt. Vernon					1180			2
Myrtle						365		1
Maverick					327	288		1
Middle						1015		2
North					1682	180		2
Nashua						800		1
Oliver						793		2
Prospect								1
Prichard					1965			3
Payson					466		879	3
Portland						455		
River			1580					2
Railroad					418			1
Summer					2096			1
South					440			1
School						260		1
Walnut					1360			2
Total	1,255	2,016	1,580	1,522	14.140	9,417	1,534	45

Total length cement mains, low service, 31,464 feet.

TABLE

Showing length, location and size of cement mains, high service.

STREETS.	16 in.	14 in.	12 in.	10 in.	8 in.	6 in.	4 in.	Gates
Shattuck Brook conduit		8627						2
Overlook to Marshall	1050							1
Arlington				2091				1
Academy						787		1
Ashburnham						3300		3
Blossom						575	405	
Caldwell				2259				2
Davis						903		
Hawes						780		1
Hazel							475	
Mt. Vernon						1035		1
Prospect						970		1
Princeton Road						1995		1
River				4180				2
Simonds						1719		1
Sanborn						2880		
South							680	1
Taft							660	1
West				3920				1
Westminster				5340				2
Westminster Road						750		1
Total	1,050	8,627		16,890		13,094	2,220	24

Total length of cement mains, high service, 41,878 feet.

TABLE

Showing length, location and size of iron mains, low service.

STREETS.	16 in.	14 in.	12 in.	10 in.	8 in.	6 in.	4 in.	2 in.	Gates
Albee							1885		2
Academy							444	384	1
Blossom					191				1
Brigham							335		1
Beacon							580		1
Boutelle							655		1
Bemis Road						1810	1604		3
Bluff Avenue							407		1
Birch							220		1
Congress							1057		2
Cedar							396		
Circle							724		2
Crocker							400		1
Cross							358		1
Clinton							585		1
Cherry							535		2
Church							480		1
Canton							800		1
Day							1052		2
Duck Mill Road						900			2
Doane							443		1
Forest							536		1
Fourth						611			1
Grove							831		2
Goddard							372		
Green						1765			4
High							500		
Heywood									1
Highland Avenue							815		2
Holt							452	143	2
Lincoln							500	909	2
Laurel						500			3
Leominster Road									1
Lunenburg						2176			2
Main	3500		1515	480					15
Mechanic	3450	2250							3
Milk						851	513		2
Mack Road							1028	474	2
Myrtle							875		2
Newton Place						457			2
Orange							264		1
Oak							509		2
Prospect					425				1
Pearl						91	183		1
Payson							240		1
Prichard					64				1
Pleasant						2210			3
Pacific							300		1
Ridge	6573								1
River							252		
Spruce							486		1
Summer						2370	495		2
Scythe Shop Road							1393		1
Spring							285		1
Snow						1045			2
South						650			1
Water				1339	5304		500		6
Wilmot							365		1
Winter						341	835		2
Winthrop							498		1
Wanoosnac Road							500		2
Willow							370		1
Total	13,523	2,250	1,515	1,819	5,943	15,777	26,857	1,910	108

Total length of iron mains, low service, 69,635 feet.

TABLE

Showing length, location and size of iron mains, high service.

STREETS.	16 in.	14 in.	12 in.	10 in.	8 in.	6 in.	4 in.	2 in.	Gates
Overlook to Marshall			1100						1
Arlington				800					1
Ashburnham								670	1
Blossom							680	1270	1
Burnap							570		1
Cleghorn						1017	400		1
Clarendon						342	284		2
Charles							285		1
Daniels							425		1
Everett							355		1
Eaton							200		1
Forest							655		1
Fairmount						1227			
Fairview							768		1
Federal							690		1
Franklin					1390				1
Hazel									1
Kimball						3264			6
Linden							480		
Main					585		850		3
Mt. Vernon							500		1
Mt. Globe							345		1
Marshall							343		1
Maple							325		1
Nutting							480	360	1
Otis							380		1
Prospect					425	146	280		2
Princeton Road						600			
Pratt Road							1614	387	2
Pine						1987			2
Phillips							810		1
Plymouth							190		1
Rollstone					2873				3
River						532			1
South						866	500	800	2
Sprague							646		1
Temple							445		1
Vernon							701		1
Westminster Road					650				
Westmins'r Hill Rd.							4178		4
Wachusett							889		
Total			1,100	800	5,923	9,981	19,260	3,493	53

Total length iron pipe, high service, 40,557 feet.

REPLACING CEMENT PIPE.

The work of replacing cement mains with cast iron has been continued the past year. The following table gives length, location and size of pipe replaced :

Snow street,	1043 feet of 6 inch.
Westminster Hill road,	1000 feet of 4 inch.
Summer street,	1000 feet of 6 inch.
South street,	650 feet of 6 inch.
Fourth street,	457 feet of 6 inch.
Green street,	1765 feet of 6 inch.
Highland Avenue,	815 feet of 4 inch.
Congress street,	770 feet of 4 inch.
Clinton street,	165 feet of 4 inch.
Holt street,	600 feet of 4 inch.
Oak street,	509 feet of 4 inch.
Winter street,	341 feet of 6 inch.
Charles street,	285 feet of 4 inch.
Franklin street,	1390 feet of 8 inch.
Rollstone street,	1790 feet of 8 inch.
North Main and Prospect street,	950 feet of 10 inch.
North Main and Prospect street,	950 feet of 8 inch.

Total length replaced, 14,487 feet.

It is the unanimous opinion of the Water Commissioners that the work of replacing the cement mains with cast iron should be continued as fast as possible. We would respectfully call the attention of the City Council to the necessity of providing funds for this work, either by obtaining authority to issue water bonds, or in some other manner

placing a loan. We would also ask your prompt action on this matter, as orders for pipe can be placed at better prices early in the winter, and prompt delivery of pipe secured.

MAINTENANCE.

Leaks have been repaired as follows: 4 joints, 13 hydrants, 39 bursts, 28 leaks in service pipes. Total number repaired, 84.

STATEMENT OF MAINTENANCE AND REPAIRS.

Paid Interest on Water Bonds,	
Repairs on cement pipe,	$1,628 05
Damage for flooding cellars,	13 00
Meters and repairs,	408 30
Expense of putting pipe under river at River Street bridge,	179 50
Repairs on hydrants, service pipes and general maintenance,	2,802 12
Printing, Stationery and office expense,	270 83
A. W. F. Brown, Water Registrar's salary,	700 00
½ Water Commissioners and Supt's., salary,	740 63

Cost of repairs on 14 miles of cement mains,	$1,628.05
Cost of repairs on 20.8 miles of cast iron mains,	24.75

Our thanks are due His Honor the Mayor, the City Council, and the Water Committee, for the courtesy shown us at all times.

Value of stock and tools at City Hall,	$6,372.46
Value of stock and tools at pipe yard,	4,031.58

Annexed is a detailed statement of expenditures for construction, maintenance, and replacing cement mains. Also the report of the Registrar to the Commissioners, which we submit as part of ours.

REPLACING CEMENT PIPE.

Paid	Pay roll,	$4,179 14	
	Warren Foundry,	9,583 26	
	Putnam Machine Co., castings,	286 71	
	S. S. & G. A. Lawrence, labor,	4 87	
	Fred Adee & Co., gate boxes,	77 00	
	Fitchburg R. R. Co., freight,	175 00	
	Baker Brothers & Co., tools,	28 13	
	Chapman Valve Co., valves and hydrants,	475 11	
	Chadwick Lead Works, lead,	534 99	
	I. C. Wright & Co., tools, etc.,	44 32	
	Fitchburg Street Railway Co.,	20 00	
	Builders' Iron Foundry,	22 00	
	Sewall & Day Cordage Co.,	11 06	
	George H. Chapman, boots,	30 00	
	J. Cushing & Co.,	88 65	
	G. Darby, blacksmithing,	10 00	
	M. J. Hogan, blacksmithing,	99 26	
	Charles Carr, rubber packings,	16 20	
	Fitchburg Machine Works, taps,	20 00	
	R. D. Wood & Co., hydrants,	192 00	
	John D. Morrill, sundries,	14 48	
	Total for replacing cement pipe,		$15,912 08
	Balance unexpended,		51 85
			$15,963 93

Cr.

By Bonds sold,	$15,000 00	
Balance unexpended 1886,	963 93	
		$15,963 93

MAINTENANCE ACCOUNT.

Paid Pay roll,	$2,889 41	
Mial Davis, lumber,	12 84	
Chas. A. Priest, lumber,	105 33	
H. F. Rockwell, glycerine,	20 65	
J. Cushing & Co., sawdust,	2 10	
M. J. Hogan, blacksmithing,	6 62	
James G. Hayden, blacksmithing,	37 92	
W. P. Murphy, blacksmithing,	27 91	
G. Darby, blacksmithing,	10 94	
Fitchburg Machine Works,	4 65	
Telephone,	76 05	
Baker Brothers, stationery and books,	42 08	
G. B. Knowlton, sundries,	61 39	
A. W. F. Brown, sundry bills paid,	461 11	
Richard E. Luke & Son, index,	18 00	
Mack & Jennison, pipes, etc.,	22 76	
G. M. Parks, pipes, etc.,	86 11	
G. W. Wright, printing,	13 00	
Blanchard & Brown, printing,	9 50	
I. C. Wright & Co., sundries,	26 75	

Paid W. W. Smith, repairs,	7	30
Fitchburg File Works, files,	8	60
George E. Waite, blacksmithing,	1	75
George H. Chapman, rubbers,	11	50
Baker Brothers & Co., tools,	34	24
Union Water Meter Co., meters and repairs,	339	10
F. W. Aldrich, sundries,	6	25
Old Colony Railroad Co., freight,	6	53
R. D. Wood & Co., hydrants,	102	00
Putnam Machine Co.,	38	46
Chapman Valve Co., repairs,	32	76
Lorin Hosley, binding plans,	19	25
J. M. R. Eaton, damage from water,	10	00
J. M. Whitney, damage from water,	3	00
George Robbins & Co., sundries,	4	80
Heywood, Wilson & Co., castings,	56	70
G. F. Saunders, sundries,	4	50
G. M. Wheelock, trucking,	13	50
Albert McGinnis, trucking,	12	00
W. C. Johnson, oil,	7	50
F. Sheldon & Co., lumber,	2	52
L. Sprague & Co., sundries,	3	08
A. H. Kimball, sundries,	5	95
E. Parker, blacksmithing,	4	74
Walworth Mfg. Co., seals,	9	00
Davis & Farnum, castings,	53	52
M. N. Benjamin, sundries,	21	98
L. McMaster, trucking,	9	75
Estate of H. F. Litch,	17	00
J. P. Sheldon, filing saws,	3	20
E. B. Twitchell,	12	00

Paid Fred Adee & Co., gate boxes,	60 00	
Chadwick Lead Works, lead,	160 00	
Warren Foundry, pipe,	215 00	
A. W. F. Brown, water registrar,	700 00	
One half Superintendent's salary,	650 00	
One half Water Commissioners' salary,	90 63	
Total maintenance,		$6,742 43
Interest on Water Bonds,		27,487 50
Total maintenance,		$34,229 93
Balance carried to sinking fund,		11,273 91
		$45,503 84

Cr.

By cash received for water rates,	$28,969 43	
By cash received for water rates, city,	15,300 00	
By cash due for water rates,	1,234 41	
		$45,503 84

We estimate the maintenance for the next year as follows:

One half Superintendent's salary,	$650 00
One half Water Commissioners' salaries,	100 00
Water Registrar's salary,	800 00
Water meters and repairs,	600 00
Labor and supplies,	6,000 00
	$8,150 00

CONSTRUCTION ACCOUNT.

Paid	Pay roll,	$7,572 79
	Putnam Machine Co., castings,	618 82
	Wetherbee & Derby,	4 04
	Davis & Farnum, castings,	6 93
	W. P. Murphy, blacksmithing,	63 78
	Godfrey Hadd, blacksmithing,	63 27
	Nicholas Parker, blacksmithing,	5 35
	M. J. Hogan, blacksmithing,	13 32
	National Meter Co., meters,	971 15
	Union Water Meter Co., meters,	583 50
	Albert McGinnis, trucking,	5 25
	I. C. Wright & Co., pipe and tools,	581 57
	G. M. Parks, pipe and fittings,	501 44
	Braman, Dow & Co., pipe,	681 46
	George Robbins & Co., pipe,	101 86
	Sumner & Goodwin, fittings,	55 89
	J. H. Cunningham, pipe,	125 50
	Mack & Jennison, pipe,	27 67
	Warren Foundry, pipe,	4,766 22
	Chadwick Lead Works, pipe and lead,	546 30
	Chapman Valve Mfg. Co., valves,	170 30
	Fred Adee & Co., gate boxes,	37 50
	Sewall & Day, gasket,	28 00
	F. A. Osborn, brick,	15 00
	Old Colony R. R., freight,	62 05
	Whittier Machine Co., rubber,	8 63
	R. D. Wood & Co., hydrants,	102 00
	George H. Chapman, rubber boots,	15 00

Paid	Heywood, Wilson & Co., stop boxes,	398 88	
	Fitchburg Street R. R. Co.,	25 00	
	H. J. Lacey, sundries,	6 38	
	W. W. Smith, explosives,	49 54	
	Rodney Wallace, bagging,	8 44	
	Joseph Pierce, leather,	2 00	
	C. B. Coburn & Co., pipe clay,	4 00	
	I. N. Choate, trucking,	26 69	
	P. C. Burr, teams,	12 00	
	Charles L. Tenney, pattern,	8 75	
	One half Water Commissioners' salaries,	90 62	
	One half Superintendent's Salary,	650 00	
	Total construction,		$19,016 89

Cr.

By cash received for service pipe,	$4,342 55	
By cash due for service pipe,	2,932 04	
		$7,274 59
Net construction,		$11,742 40
Balance unexpended,		157 60
		12,000 00

CONTRA.

Appropriation,	$12,000 00

SUMMARY OF STATISTICS.

REPORT OF 1887.

FITCHBURG WATER WORKS,

WORCESTER COUNTY, MASS.

Date of construction, 1871 and 1872.

Population by census of 1885, - - - - - - 15,375.

By whom owned: The City of Fitchburg.

Source of supply: Two storage reservoirs on Scott and Falulah brooks.

Mode of supply: By gravitation.

FINANCIAL.

MAINTENANCE.

RECEIPTS.

From consumers:		
a. Water rates, domestic,	$23,230 42	
b. Water rates, manufacturing,	6,973 42	
c. Net receipts for water,		$30,203 84
From public funds:		
f. Hydrants,	$12,250 00	
g. Fountains,	750 00	
h. Street Watering,	800 00	

i. Public buildings,	1,300 00	
j. Water bonds issued for replacing cement pipe, and balance on hand,	15,963 93	
		$31,263 93
k. Gross receipts,		$61,467 77

EXPENDITURES.

A. A. Management and repairs,	$6,742 43	
Replacing cement mains with cast iron,	15,912 08	
B. B. Interest on bonds,	27,487 50	
C. C. Total maintenance for the year,		$50,142 01
D. D. Balance to sinking fund,		11,273 91
Balance cement pipe on hand,		51 85
K. K. Total,		$61,467 77

CONSTRUCTION.

RECEIPTS.

T. Appropriation from tax levy,	$12,000 00
U. Service, private lines, meters, etc.,	7,274 59
V. Total,	$19,274 59

EXPENDITURES.

F. F. Extension of mains,	$8,762 01
G. G. New service pipes and temporary mains,	8,700 23

H. H. Meters, etc.,	1,554 65
J. J. balance,	257 60
K. K. Total,	$19,274 59
W. Net cost of works to date,	$621,701 02
X. Bonded debt to date,	500,000 00
Y. Value of sinking fund at date,	150,100 99
Z. Average rate of interest,	5.55 per cent.

CONSUMPTION.

1.	Estimated total population at date,	20,000
2.	Estimated population on line of pipe,	18,000
3.	Estimated population supplied at date,	14,000
4.	Estimated number of gallons consumed for the year,	432,000,000
5.	Passed through domestic meters,	17,596,000
6.	Passed through manufactory meters,	104,601,301
7.	Estimated average daily consumption,	1,183,500
8.	Gallons per day to each inhabitant, (1),	59
9.	Gallons per day to each consumer, (3),	84
10.	Gallons per day to each (tap distribution 22),	537

DISTRIBUTION.

MAINS.

1.	Kind of pipe used,	Wrought iron, cement lined, cast iron.
2.	Size,	From 2 to 16 inch.
3.	Extended,	13,504 feet.
4.	Discontinued,	1,363 feet.
5.	Total now in use,	34.77 miles.
6.	Cost of repairs per mile, 14 miles cement,	$116.29
	Cost of repairs per mile, 20.8 miles cast iron,	$1.19

7.	Number of leaks for the year,	4 joints, 39 bursts.
8.	Small distribution pipes less than 4 inches,	1.73 miles.
9.	Hydrants added,	11
10.	Hydrants now in use,	256
11.	Stop gates added,	61
12.	Stop gates now in use,	230
13.	Number of small stop gates less than 4 inches,	20
14.	Number of blow off gates,	7
15.	Range of pressure at City Hall for day and night:	
	High service, 155 to 160.	
	Low service, 78 to 80.	

SERVICES.

16.	Kind of pipe used,	Wrought iron, cement, cast iron.
17.	Size,	From ¾ inches, to 6 inches.
18.	Extended,	10339 feet.
20.	Total now in use,	26.88 miles.
21.	Service taps added,	204
22.	Number now in use,	2203
23.	Average length of service,	50.68 feet.
24.	Average cost of service, (net),	$7.02
25.	Meters added,	92
26.	Number now in use,	545
	(a), Domestic,	464
	(b), Manufactories,	81
27.	Motors and elevators added,	4
28.	Number now in use,	15

C. H. BROWN,
THOS. C. LOVELL,
S. D. SHELDON,
} *Water Commissioners.*

REPORT OF WATER REGISTRAR.

WATER REGISTRAR'S OFFICE,
City of Fitchburg, Dec. 1, 1887.

To the Honorable Board of Water Commissioners:

GENTLEMEN:—The following is the annual statement of my accounts as Water Registrar for the year ending this date.

The receipts have been as follows:

Received from metered water (manufacturing),	$6,973 42	
Received from metered water (domestic),	6,158 72	
Total,		$13,132 14
Received from water rates,		$16,619 94
Received credit for water used by city,		15,300 00
Total receipts from water,		$45,052 08
Received from service pipe,	$7,328 25	
Transferred from other city departments,	153 61	
Total receipts from service pipe,		$7,481 86
Amount,		$52,533 94

CONTRA.

Paid cash to Henry A. Willis, Treasurer,	$37,080 33	
Transferred by Treasurer,	15,453 61	
Amount,		$52,533 94

The following amounts are due this department:

From metered water (manufacturing),	$102 72	
From metered water (domestic),	548 42	
From water rates,	583 27	
Total due for water,		$1,234 41
From service pipe,		2,932 04
Total,		$4,166 45

Receipts for water,	$45,052 08	
Amount due for water,	1,234 41	
		$46,286 49
Less amount due Dec. 1, 1886,		782 65
Receipts from water in 1887,		$45,503 84

CONTRA.

Interest on Water Bonds paid by Treasurer,	$27,487 50	
Maintenance,	6,742 43	
Total maintenance,		$34,229 93
Balance carried to Sinking Fund,		11,273 91
		$45,503 84

There are now in use 545 meters, 91 having been added since Dec. 1, 1886. Of these the city owns 81 and individuals 464. Five meters have been taken out and the parties having them are paying fixed rates.

Water is supplied as follows:

Families,	2,534	Gas companies,	1
Stores and offices,	147	Engine and hose companies,	7
Manufactories,	51	Electric light companies,	1
Stables,	96	Green houses,	3
Printing offices,	5	City Hall,	1
Almshouses,	1	Railroad engine houses,	4
Jails,	1	Bakeries,	3
Boarding houses,	11	Gingham mills,	1
Drinking hydrants,	9	Cotton mills,	1
Watering troughs,	7	Woolen mills,	7
Watering cart posts,	8	Yarn mills,	2
School houses,	12	Dye houses,	1
Depots,	2	Churches,	10
Motors,	15	Foundries,	5
Police stations,	3	Laundries,	2
Paper mills,	14	Hotels,	5
Elevators,	7	Court houses,	1
Total, - - - - - - - -			2978

There are also 40 services laid to new houses not yet finished or not occupied.

Statement of water receipts and maintenance from 1872 to 1887 inclusive :

Year.	Receipts.	Maintenance.
1872	$2,107 93	$1,473 57
1873	7,475 39	1,129 61
1874	10,405 81	1,240 00
1875	11,472 53	1,493 73
1876	12,928 79	5,547 84
1877	13,070 41	4,318 63
1878	14,074 99	3,170 69
1879	14,253 77	2,795 76
1880	15,640 53	5,713 15
1881	16,267 37	4,813 16
1882	18,842 11	4,398 69
1883	20,228 69	6,000 68
1884	23,359 44	8,017 02
1885	25,599 51	17,396 72
1886	38,971 36	34,755 49
1887	45,503 84	34,229 93
	$290,202 47	$136,494 67

Total cost of works, to date, $621,701 32.

Respectfully submitted,

A. W. F. BROWN,

Water Registrar.

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